

### REMARKS

In the September 9, 2005 Office Action, the specification was objected to and claims 1-10 stand rejected in view of prior art. Claim 6 was objected to for informalities.

#### ***Status of Claims and Amendments***

In response to the September 9, 2005 Office Action, Applicants have amended the specification and claims as indicated above. Thus, claims 2 and 4-10 are pending, with claims 2, 4, 6 and 9 being the only independent claims. Reexamination and reconsideration of the pending claims are respectfully requested in view of above amendments and the following comments.

#### ***Specification***

In paragraph 2 of the Office Action, the specification was objected to for having a title that is not descriptive and for allegedly referring to purported merits or speculative applications of the invention in the abstract. In response, Applicants have amended the abstract and the title of the invention according to the suggestion in the Office Action.

Applicants believe that the specification is now correct and complies with 37 CFR §1.71 and 37 CFR §1.75(d)(1). Withdrawal of the objections is respectfully requested.

#### ***Claim Objections***

In paragraph 5 of the Office Action, claim 6 was objected to for informalities. Claim 6 has been amended according to the suggestion in the Office Action. Withdrawal of the objection is respectfully requested.

#### ***Claim Rejections - 35 U.S.C. §112***

In paragraph 6 of the Office Action, claims 1 and 4 were rejected under 35 U.S.C. §112, second paragraph for allegedly reciting a range within a range.

Applicants have amended the language that was considered to be indefinite. Applicants believe that the scope of claims 2 and 4 have been unchanged. Applicants believe that the claims comply with 35 U.S.C. §112, second paragraph. Withdrawal of the rejection is respectfully requested.

***Rejections - 35 U.S.C. § 103***

In paragraph 8 of the Office Action, claims 1-3, 9 and 10 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,116,874 (Nation et al) in view of U.S. Patent No. 6,116,866 (Tomita et al). Claims 4-8 stand rejected in view of Nation et al, Tomita et al and U.S. Patent No. 5,346,373 (Riffe) in paragraph 12 of the Office Action. In response, Applicants have cancelled claims 1 and 3 and rewrote claims 2 and 6 as independent claims. Also claim 4 was merely amended to clarify the language that was considered to be indefinite.

***The Prior Art Does Not Disclose or Suggest the Limitations of Independent Claim 2***

Independent claim 2 recites that two discharge openings are placed in an open or closed state by a reed valve. A first portion of the reed valve corresponds to one of the discharge openings on a leading end side of the reed valve and a second portion of the reed valve corresponds to another one of the discharge openings on a base end side of the reed valve. Independent claim 2 further recites that the reed valve includes a ***small-width part*** of smaller width dimension between the second portion corresponding to the discharge opening on the base end side and the first portion corresponding to the discharge opening on the leading end side. Clearly, this arrangement is ***not*** disclosed or suggested by Nation et al, Tomita et al or any other prior art of record. It is well settled in U.S. patent law that the mere fact that the prior art can be modified does ***not*** make the modification obvious, unless the ***prior art suggests*** the desirability of the modification.

In paragraph 11 of the Office Action, the Office Action states:

It should be noted that varying the width of a cantilever beam provides the same variation in bending strength as varying material or thickness as taught by Tomita et al., thus reading on the teachings in claims 2 and 3.

Essentially, the Office Action has rejected the limitations of claim 2 without using a reference and has taken Official Notice. In other words, the Office Action has taken Official Notice that varying the width of a cantilever beam provides the same variation in bending strength as varying material or thickness without citing a prior art reference showing that such are identical in bending strength.

MPEP §2144.03 B. states:

Ordinarily, there must be some form of evidence in the record to support an assertion of common knowledge. See *Lee*, 277 F.3d at 1344-45, 61 USPQ2d at 1434-35 (Fed. Cir. 2002); *Zurko*, 258 F.3d at 1386, 59 USPQ2d at 1697 (holding that general conclusions concerning what is “basic knowledge” or “common sense” to one of ordinary skill in the art without specific factual findings and some concrete evidence in the record to support these findings will not support an obviousness rejection).

Applicants hereby traverse the Official Notice and demand documentary evidence showing that varying material or thickness of a valve is identical in bending strength to providing a reed valve with a small-width part.

“If such notice is taken, the basis for such reasoning must be set forth explicitly. The examiner must provide specific factual findings predicated on sound technical and scientific reasoning to support his or her conclusion of common knowledge.” MPEP §2144.03 B.

It is not of unquestionable demonstration as being well-known that providing a reed valve with a small-width part provides the same variation in bending strength as varying material or thickness. Indeed, the varying of material or thickness can provide numerous

structural characteristics such that it is not identical in bending strength as providing a reed valve with a small-width part.

In addition, the Office Action does not provide motivation to modify Tomita et al to have a small width part. The statement in paragraph 11 does not address why one of ordinary skill in the art would modify the valve of Tomita et al with a small-width part. Indeed, the entire disclosure of Tomita et al relies on a variation in material and/or thickness.

Furthermore, it is unclear whether the valve of Tomita et al would fully cover the opening with a small-width part. Thus, in addition to a lack of motivation, the teachings of Tomita et al would be destroyed if modified with a small-width part.

***The Prior Art Does Not Disclose or Suggest the Limitations of Independent Claims 4 and 6***

The Office Action essentially suggests that one of ordinary skill in the art would modify the valve mechanism of Nation et al with the reed valve 5 of Tomita et al, having various thicknesses, and then further modify this with the poppet valve 68 disclosed in Riffe.

Riffe discloses a poppet valve 68 held by a spring 51 that is attached at both ends. As the poppet valve 68 moves, it relies on the spring 51 being attached at both ends and a stop member 56 to function as intended by the inventor. See column 6, lines 46-61.

In contrast, the valve of Nation et al, as modified by the valve of Tomita et al, ***would not have the appropriate structure to operate the poppet valve 68 of Riffe.*** In combining Nation et al with Tomita et al, the Office Action suggests providing a cantilevered valve element that has various thicknesses, as shown in Figures 3c and 4 of Tomita et al.

Applicants respectfully assert that ***such a valve cannot support the poppet valve 68 of Riffe,*** which clearly requires: a) a spring 51 that is cantilevered at a first point of operation; b) the spring 51 attached at both ends at a second point of operation; and c) a stop member 56. See column 6, lines 46-61 of Riffe.

Accordingly, one of skill in the art would not further modify the hypothetical valve of Nation et al and Tomita et al with the poppet valve 68 of Riffe because there is no reasonable expectation of success.

MPEP §2143.02 requires that there must be a reasonable expectation of success if the prior art is to be modified or combined. Accordingly, the prior art of record lacks any suggestion or expectation of success for combining the patents to create the Applicants' unique variable displacement compressor.

In paragraph 13 of the Office Action, the Office Action states:

It should be noted that variation of discharge port diameter and lift amount is synonymous with varying width and thickness of a reed valve and provides identical results; therefore, one of ordinary skill in the art at the time the invention was made would have been able to arrive at the cited dimensions and shapes without undue experimentation.

Basically, the Office Action has rejected the limitations of claim 5 without using a reference and has taken Official Notice. The Office Action has taken Official Notice that variation of a discharge port diameter and lift amount is synonymous with varying width and thickness of a reed valve and provides identical results.

For the reasons above, Applicants hereby traverse the Official Notice and demand documentary evidence showing that: a) a first discharge port diameter that is less than a second discharge port diameter; and b) a second lift amount that is less than a first lift amount are synonymous with varying width and thickness of a reed valve and provide identical results.

It is not of unquestionable demonstration as being well-known that a) a first discharge port diameter that is less than a second discharge port diameter; and b) a second lift amount is less than a first lift amount are synonymous with varying width and thickness of a reed valve and provide identical results. Indeed, the varying of material or thickness can provide

numerous structural characteristics such that it is not identical to providing the above mentioned claimed limitations.

Claim 5 recites three limitations: a) a first discharge port diameter that is less than a second discharge port diameter; b) a second lift amount that is less than a first lift amount and c) *a first seat diameter that is less than a second seat diameter*. Applicants note that even considering the Official Notice, the limitation concerning the seat diameters was not addressed in the Office Action.

The Office Action states in paragraph 13 that one of skill in the art would have been able to arrive at the cited dimensions and shapes without undue experimentation. Even if this could be considered accurate, *arguendo*, the Office Action has not provided any motivation as to why one of skill in the art would modify the teachings of Nation et al, Tomita et al or Riffe to create the claimed discharge opening diameters, seat diameters and lift amounts.

***The Prior Art Does Not Disclose or Suggest the Limitations of Independent Claim 9***

Independent claim 9 requires a first valve mechanism with a first valve element and a second valve mechanism with a second valve element. Independent claim 9 further requires that *the first valve element have a bending strength smaller than that of the second valve element*.

The Office Action is silent as to how Nation et al and Tomita et al disclose or suggest the first *and* second valve mechanisms together with the first *and* second valve elements. Most importantly, the Office Action is silent as to how Nation et al and Tomita et al disclose or suggest *a first valve element having a bending strength smaller than that of a second valve element*.

At best, Tomita et al discloses varying stiffness *within a first valve element*. Tomita et al does not disclose variations between a first valve element *and* a second valve element.

Thus, there is no teaching within Nation et al and Tomita et al to provide *a first valve element having a bending strength smaller than that of a second valve element*.

Accordingly, the prior art of record lacks any suggestion or expectation of success for combining the patents to create the Applicants' unique variable displacement compressor.

Moreover, Applicants believe that dependent claims 5, 7, 8 and 10 are also allowable over the prior art of record in that they depend from independent claims 4, 6 and 9, and therefore are allowable for the reasons stated above. Also, the dependent claims are further allowable because they include additional limitations. Thus, Applicants believe that since the prior art of record does not disclose or suggest the invention as set forth in independent claims 4, 6 and 9, the prior art of record also fails to disclose or suggest the inventions as set forth in the dependent claims.

Therefore, Applicants respectfully request that the rejections be withdrawn in view of the above comments and amendments.

***Prior Art Citation***


In the Office Action, additional prior art references were made of record. Applicants believe that these references do not render the claimed invention obvious.

Appl. No. 10/517,144  
Amendment dated December 6, 2005  
Reply to Office Action of September 9, 2005

***Conclusion***

In view of the foregoing amendment and comments, Applicants respectfully assert that claims 2 and 4-10 are now in condition for allowance. Reexamination and reconsideration of the pending claims are respectfully requested.

Respectfully submitted,

  
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